



[10191/3583]

**UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Juergen BREITENBACHER et al.

For: METHOD AND DEVICE FOR BRAKING  
TWO WHEELS OF A VEHICLE

Filed: September 22, 2005

Serial No.: 10/524,599

Examiner: John F. MORTELL

Art Unit: 3657

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**REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41**

SIR:

Appellant submits the present Reply Brief (the two-month response date for which is October 18, 2010 in response to the Examiner's Answer dated August 18, 2010 ("the Answer")).

It is respectfully submitted that the final rejections of claims 14 and 16 to 46 should be reversed, and these claims should be allowed for the reasons explained herein.

**Finally, the Office is again encouraged to contact the undersigned if there are any questions as to any matters.**

## **REMARKS**

### **THE OBVIOUSNESS REJECTIONS OF CLAIMS 14 AND 16 TO 46**

Claims 14 and 16 to 46 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,388,896 (“Hartmann”) in view of U.S. Patent No. 6,030,055 (“Schubert”).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Any review of the Answer makes plain that it represents nothing more than impermissible hindsight in suggesting that it is somehow desirable to obtain the benefits of the presently claimed subject matter by using the claim 14 features.

In particular, claim 14 includes the features of “setting the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure,” in which “*the second wheel of the two wheels is predesignated as a controlled wheel, the setting of the second brake pressure includes performing the following: determining a desired second pressure differential of the*

*hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve; determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential; and using the determined coil current to generate the desired second pressure differential*", as provided for in the context of the presently claimed subject matter.

The present application explains that

Claim 14 includes the features of setting the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, in which the first wheel of the two wheels is predesignated as a regulated wheel, and setting the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, in which the second wheel of the two wheels is predesignated as a controlled wheel, the setting of the second brake pressure including performing the following: determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential, and using the determined coil current to generate the desired second pressure differential.

The Substitute Specification explains that the presently claimed subject matter relates to a method for "braking two wheels of a vehicle, in which the value of the brake pressure in the wheel-brake cylinder allocated to the first wheel is linked with the value of the brake pressure in the wheel-brake cylinder allocated to the second wheel." It further explains that "[i]n this context, the linkage is provided based on the hydraulic pressure differentials decreasing at the respective intake valves", and that one advantageous embodiment is characterized in that "the coil current through the specific intake valve is ascertained", and from this, "the pressure differential decreasing at the specific intake valve is determined."

Accordingly, one advantageous refinement is characterized in that, with the knowledge of the pressure differential decreasing at the specific intake valve, the coil current through the specific intake valve is also known. This allows a particularly simple and robust control, since a predefined current can be set substantially more easily than a predefined pressure differential.

Nothing in the applied references discloses or suggests the foregoing claim 14 features and their benefits, except by making unjustified leaps across the pond of patentability using non-existent stepping stones – which are found nowhere in the applied references. In short, nothing in the Answer really explains or justifies how the unsupported assertions are supported without the benefit of hindsight.

Still further, as previously explained, the “Hartmann” reference refers to triggering a valve allocated to a wheel *to prevent a further build up of pressure* on the wheel. The “Hartmann” reference does not disclose, or even suggest, the feature of setting the brake pressure of one wheel and then setting the brake pressure of another wheel based on a value resulting from the setting of the brake pressure of the first wheel, as provided for in the context of the presently claimed subject matter. As to the Abstract, it merely refers to “the *build-up of braking pressure on at least one wheel is influenced*” -- and not to setting the brake pressure in a first wheel and then setting the brake pressure in a second wheel based on a value resulting from the setting of the first brake pressure, as with the presently claimed subject matter. The Abstract further refers to the “braking pressure on the wheels of one axle is influenced to such an extent that *the differential between the braking pressures of one axle does not exceed a maximum permissible value*”. However, the individual braking pressures of the 2 wheels are not set, and instead *a maximum permissible value of the differential between the braking pressures of the wheels of one axle* is determined based on the vehicle speed and the transversal acceleration. As to the cited text at column 3, lines 24 to 45, it refers to what occurs in the event of a sudden, sharp pressure drop on a front wheel, and its effect on the other wheels. This also does not disclose setting the brake pressure in a first wheel and then setting the brake pressure in a second wheel based on a value resulting from the setting of the first brake pressure, as provided for in the context of the presently claimed subject matter.

Further, the “Hartmann” reference does not disclose, or even suggest, the feature of predesignating one wheel as a regulated wheel and redesignating another wheel as a controlled wheel, the brake pressure of the controlled wheel to be set based on a value resulting from the setting of the brake pressure of the regulated wheel. The “Hartmann” reference refers to triggering a valve of one of two wheels to prevent a further build up of pressure. The wheel on which a further build up of pressure is prevented can be *either* of the

two wheels, and will be the wheel with the higher pressure when the difference in pressure between the two wheels exceeds a threshold. In particular, the wheel on which a further build up of pressure is prevented is not predesignated.

Still further, the Answer and the Office Actions to date effectively admit that the “Hartmann” reference does not disclose the feature of determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential, and using the determined coil current to generate the desired second pressure differential.

As to the “Schubert” reference, it only refers to a method and a device for regulating pressure in a wheel brake, a regulator for pressure regulation forming a trigger signal from the pressure relationships prevailing at the valve arrangement. A valve arrangement is provided for pressure buildup and reduction. By measuring the actual brake pressure and comparing it with a setpoint pressure, a difference is determined and taken into account with an altered trigger signal. The relationship between the trigger signal and the pressure relationships is stored as a characteristic curve for the pressure buildup and reduction.

As to the cited text at col. 1, lines 47-end of Schubert, it does not disclose using a differential pressure in an intake valve in a control method. However, even if this were so (which is not admitted), the “Schubert” reference does not disclose the feature of determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, as provided for in the context of the presently claimed subject matter.

Accordingly, the “Hartmann” and “Schubert” references, whether taken alone or combined, do not render obvious claim 14.

For at least the reasons explained above, claim 14 is allowable, as are its dependent claims 16 to 23 and 41 to 46.

Claim 24, as presented, includes features analogous to those of claim 14, as presented, and it is therefore allowable for essentially the same reasons as claim 14, as are its dependent claims 25 to 40.

As still further regards each of the obviousness rejections, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Answer and the Office Actions to date reflect a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

**Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.**

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

**Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].**

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the Answer and the Office Actions to date offer no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address

the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

Also, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept” — which is not the case here — there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed,” stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Here again, there have been no such findings to establish that the features discussed above of the rejected claims are met by the reference relied upon. As referred to above, any review of the references, whether taken alone or combined, makes plain that the references simply do not describe the features discussed above of the rejected claims.

Thus, the proper evidence of obviousness must show why there is a suggestion as to the reference so as to provide the subject matter of the claimed subject matter and its benefits.

In short, there is no evidence that the reference relied upon, whether taken alone or otherwise, would provide the features of the claims discussed above. It is therefore respectfully submitted that the claims are allowable for these reasons.

As still further regards all of the obviousness rejections of the claims, it is respectfully submitted that a proper *prima facie* case has not been made in the present case for obviousness, since the Answer and the Office Actions to date never made any findings, such as, for example, regarding in any way whatsoever what a person having ordinary skill in the art would have been at the time the claimed subject matter of the present application was

made. (See *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998) (the “factual predicates underlying” a *prima facie* “obviousness determination include the scope and content of the prior art, the differences between the prior art and the claimed invention, and the level of ordinary skill in the art”)). It is respectfully submitted that the proper test for showing obviousness is what the “combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art”, and that the Patent Office must provide particular findings in this regard — the evidence for which does not include “broad conclusory statements standing alone”. (See *In re Kotzab*, 55 U.S.P.Q. 2d 1313, 1317 (Fed. Cir. 2000) (citing *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1618 (Fed. Cir. 1999) (obviousness rejections reversed where no findings were made “concerning the identification of the relevant art”, the “level of ordinary skill in the art” or “the nature of the problem to be solved”))). It is respectfully submitted that there has been no such showings by the Answer and the Office Actions to date or by the Advisory Action.

In fact, the present lack of any of the required factual findings forces both Appellants and this Appeals Board to resort to unwarranted speculation to ascertain exactly what facts underly the present obviousness rejections. The law mandates that the allocation of the proof burdens requires that the Patent Office provide the factual basis for rejecting a patent application under 35 U.S.C. § 103. (See *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016, 154 U.S.P.Q. 173, 177 (C.C.P.A. 1967))). In short, the Examiner bears the initial burden of presenting a proper *prima facie* unpatentability case — which has not been met in the present case. (See *In re Oetiker*, 977 F.2d 1443, 1445, 24, U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)).

Accordingly, all of pending claims 14 and 16 to 46 are allowable.



**CONCLUSION**

In view of the above, it is respectfully requested that the rejections of the finally rejected claims 14 and 16 to 46 be reversed, and that these claims be allowed as presented.

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Respectfully submitted,

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